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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,098	07/24/2000	Mario Tenuta	2527-1A	5268

7590 06/29/2004
Eric Fincham
316 Knowlton Road
Lac Brome Quebec, JOE 1V0
CANADA

EXAMINER

NAFF, DAVID M

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/624,098

Applicant(s)

TENUTA ET AL.

Examiner

David M. Naff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 & 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Response to Amendment

The response of 4/12/04 presented arguments and did not amend the claims.

Claims examined on the merits are 1-15 and 20 which are all
6 claims in the application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1-12 and 20 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Muncie et al in view of Cooley (6,300,282 B1) for
12 reasons in the previous office action of 2/18/04 and for reasons
herein.

The claims are drawn to a method of controlling soilborne
pathogens in soil by adding to the soil a nitrogen-containing material
and a pH reducing agent to reduce the soil pH to below 5.5. The
nitrogen containing material is in sufficient amount to produce
18 sufficient nitrous acid to control the soilborne pathogens.

Muncie et al disclose (page 303 under SUMMARY) that acid
fertilizer alone will reduce potato scab infection. The least amount
of scab occurred in soils of pH 3.5-3.8.

Cooley discloses adding an ammonium nitrogen source to soil when
growing potatoes (col 1, lines 33-45) to increase potato yield.

24 When using a low pH to control potato scab as disclosed by Muncie
et al, it would have been obvious to add an ammonium nitrogen source

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as disclosed by Cooley to increase potato yield. Nitrous acid would inherently be produced as required in claim 1. The pH reducing agent being in an ammonium source as in dependent claim 3 would have been suggested by Muncie et al using an acid fertilizer. Adding animal manure, meat or bone meal or soya meal as in claims 6-8 would have been obvious since these materials would have been expected to contain nitrogen. Selecting an amount of nitrogen material to apply as in claims 9 and 10 for optimum potato growth would have required only limited experimentation and been obvious. Adding the pH reducing agent before the nitrogen material or the converse as in claims 11 and 12 would have been a matter of obvious choice depending on individual preference and convenience. Measuring the pH of the soil as in claim 20 would have been obvious to determine how much the pH must be lowered to obtain the desired acid pH. The buffer capacity of claim 20 would be that of most soils for growing potatoes.

Claim Rejections - 35 USC § 103

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1-12 and 20 above, and further in view of Behel Jr. (5, 366, 533), and if necessary in further view of Weltzien et al (4,919,702).

The claims require the pH to be reduced by adding an acid such as citric acid.

Behel Jr. discloses adding to soil a citrus by-product that provides citric acid in soil to complex with iron and make the iron available for plants (col 2, lines 55-66 and col 6, line 56).

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Weltzien et al disclose adding a fertilizer to soil that contains ascorbic acid (col 3, lines 19-29) and an ammonium nitrogen source (col 5, lines 25 and 34-37).

When controlling potato scab disease by lowering the pH of soil as set forth above, it would have been obvious to add citric acid to the soil to provide the lower pH as suggested by Behel Jr providing citric acid in soil, and if needed as further suggested by Weltzien et al adding to soil a fertilizer containing ascorbic acid.

Response to Arguments

Applicants urge that the Davis et al reference previously cited and of a later date than Muncie et al found that pH does not have any effect on potato scab. However, the disclosure of Davis et al in regard to pH having no effect is with respect to using sulfur for potato scab control, and concluding that since sulfur addition lowered the pH only 0.4, the effect of sulfur on the pathogen was not due to pH lowering. This disclosure suggests that a slight lowering of pH of only 0.4 will have no effect on potato scab, and does not suggest that lowering the pH to 3.5-3.8 to reduce potato scab as disclosed by Muncie et al will have no effect.

Applicants urge Cooley has a publication date of 10/9/01 which is after the filing date of 7/24/00 of the present application. However, the effective date of Cooley as a reference is the filing date of Cooley which is 7/30/99.

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

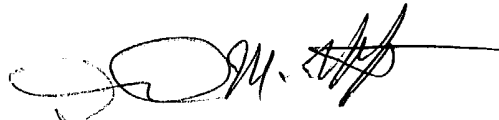
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In
6 the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be
12 however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Naff whose telephone number is 571-272-0920. The examiner can normally be reached on Monday-Friday 9:30-6:00.

18 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David M. Naff
Primary Examiner
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DMN
6/28/04